

RAILWAY AND COMMERCIAL GAZETTE

3

BOLIVAR MINING ASSOCIATION.

The annual general meeting of the shareholders in this company was held on Saturday, the 26th instant, at the offices, in Warrington-court.

ALEXANDER M'DONALD, Esq., in the chair.

The advertisement convening the meeting having been read, the CHAIRMAN said a report had been prepared, which fully explained the present situation of the company, and which would now be read to the meeting.—The report was then read. It referred to the report read at the last meeting, in which it was stated a party was about to proceed to the mines (which were delivered over to them on the 21st November, 1839), since which time, to the end of August last, the directors had received advices, circumstantially detailing the state of the property; from various causes, which were stated in the report, and the setting in of the rainy season, very little ore had been forwarded, and the trustees regretted their only being able to announce the arrival of about 200 tons; the weather was, however, improving, and further shipments expected—that everything had been conducted with the greatest economy, both at home and abroad, but that they must await the full operation of the present system before any decided opinion could be given of its real merits.

A statement of the accounts was also read, and a resolution passed for their adoption, with the report.

Thanks were then voted to the chairman, and the meeting separated.

EAST TRETOIL MINING COMPANY.

A special general meeting of the shareholders in this company was held at the offices, 6, St. Mildred's-court, on Tuesday, the 29th ult.

G. H. HEPPEL, Esq., in the chair.

The advertisement convening the meeting, and the purser's report (which will be found under the head "Mining Intelligence" in another column) having been read, the CHAIRMAN entered into a statement of facts relative to unpaid deposits on about 400 shares; it appeared that the sets of East Tretoil were granted to four individuals (Messrs. Mount, Wilkinson, Tregellas, and Robinson), who were originally entitled to one-fourth each, by whom it was agreed that a company should be formed, divided into 4000 shares, leaving each party liberty to dispose of his proportion on such terms as they might think fit, and all accordingly disposed of their shares before the formation of the present company; and, previous to issuing the scrip certificates, a meeting took place, when the regulations of the company were agreed to, and the grantees signed an undertaking to execute an assignment of the sets to trustees, the day for the payment of the deposit not being fixed, the day was settled afterwards at a meeting, at which Mr. Robinson denies being present, and declares it was done without his consent; it appears the shares in question had been sold long previous, and a dispute arose as to the liability of Mr. Robinson or the purchaser to the payment of the deposit, and which the directors have not received.—It appears, however, the parties have now settled their differences, and are anxious to pay the money.—After a short conversation, it was moved by Mr. BOURDILLON, seconded by Mr. WELLS, and carried unanimously.—That the directors be authorised to issue the scrip certificates for the shares in default, on payment of the deposit, or before the 1st of February next.

Thanks were then voted to the chairman, and the meeting separated.

RIO DOCE COMPANY.

The usual half-yearly general meeting of the shareholders in this company was advertised to be held on Wednesday, the 30th ult., but up to two o'clock, there being only about half a dozen gentlemen present, while, by the constitution of the company, fifteen are required to form a meeting, it was understood from John Saunders, Esq. (the chairman) that the directors would call an especial meeting as soon as they received any information from the Brazils which might be considered of an important nature.

MANCHESTER AND BIRMINGHAM RAILWAY.

A special general meeting of the shareholders of this railway was held in the large room of the York Hotel, Manchester, on Thursday, the 24th ult., for the purpose of considering the propriety of borrowing a sum of money on the credit of the railway, and for authorising the directors to mortgage the said railway for any sum so authorised to be borrowed. The meeting was called for 12 o'clock, but at that hour there were not many shareholders present, and those in attendance were chiefly Manchester gentlemen.

THOMAS ASHTON, Esq., in the chair.

The CHAIRMAN briefly opened the proceedings by reading the advertisement by which the meeting had been convened, and glancing at the object which the directors had in view in calling the shareholders together.

Mr. BROWN then moved a resolution, authorising the shareholders to borrow the sum of 700,000*l.*, which was seconded by Mr. SCHUSTER, and was about to be put by the chairman, when Dr. LYON said he thought it was rather premature to put a resolution to the shareholders without some explanation why such a large sum of money was required. At the preceding meeting, if he remembered right, it was stated by some of the directors that they would be prepared with an estimate of some statement respecting the actual amount that would be required to complete the work. If 700,000*l.* was still wanting, it was a sum far exceeding the original estimate.—R. SHARPE, Esq., said that Dr. LYON was in error as to the time the estimate was promised by the directors. That estimate was promised to be prepared before the next general meeting, and by that time he hoped the directors would be in a position to fulfil their promise. That was a special meeting, called for the purpose of authorising the directors to borrow a certain sum of money, and they never anticipated such questions, and were therefore unable to answer them.—Mr. NEWBERRY said that at the last meeting such a statement certainly was made by the directors, but, inasmuch as all the contracts were not yet let, the directors were not prepared to answer Dr. Lyon. The Macclesfield contract was still open, as was also the St. Peter's street station.

Dr. LYON wished to know if the directors thought the whole of the 700,000*l.* would be necessary for the completion of the work?—Mr. NEWBERRY—I think not. The whole of the 700,000*l.* will not be required.

Mr. G. R. CHAPPELL thought the Manchester and Birmingham Railway was as good a speculation as any in the country. This sum, he believed, would not be required, yet it was necessary that the directors should have power to borrow that sum, in order to give confidence to the parties from whom it was borrowed.

Mr. NEWBERRY, as one of the directors, would be very happy to answer any other question that any shareholder wished to put, for he felt assured that the more they knew of the undertaking the better they would like it.—Mr. ALBACUR wished to know if the paid-up capital had been expended, and how it was appropriated?—He was answered by Mr. BRADSHAW, that a great portion of it had been expended in the purchase of land in the neighbourhood of Macclesfield.—The CHAIRMAN said that 1,200,000*l.* had been called up, but of that sum, including the last call, about 160,000*l.* yet remained unpaid.—Mr. NEWBERRY—We have the power of calling 70*l.* on each of the 30,000 shares, which would amount to more than 2,000,000*l.*, but only 1,200,000*l.* of that sum had been called; and as it was stated by the chairman, there yet remained unpaid about 160,000*l.*, and when this is paid up, and authority given to borrow the 700,000*l.* now asked for, it is the intention of the directors to make no further calls on the shareholders; and, as soon as the Macclesfield contract is let, they would be able to give a more correct estimate of the sum required to complete the works. With regard to this contract it would be well here to state that it was the intention of the directors to proceed with it as rapidly as circumstances would admit; and the delay that had hitherto been occasioned was caused by a misunderstanding between the company and Sir Salisbury Davenport. There was an impression gone abroad—and more particularly in Macclesfield—that it was not the intention of the directors to proceed with that part of the work, but such he could assure them was not the case. The fact was, they were very anxious to proceed with it, and he felt assured that if it was convenient, in next spring, it would be completed before the Crewe contract. He again repeated, for the satisfaction of the Macclesfield people, that it was the intention of the directors to proceed with that part of the work as soon as possible.

A SHERMAN wished to know if the company would lose anything in consequence of Mr. Winterbottom having absconded; but was assured that the only sum with which Mr. Winterbottom was in any way connected was 1000*l.*, and it was under such circumstances that the directors did not apprehend any loss.

Mr. WILSON (surgeon) wished to know if the company had come to any terms with the Grand Junction Railway on the subject of running on

their line?—Mr. NEWBERRY, in answer, stated that they had settled that matter some time ago.

Some questions were asked with regard to the projected extension line, but, as that was not a meeting of the shareholders of that company, the answers could not be given.

Mr. WINDSOR wished to know if any contingency had arisen which would put the company under the necessity of again going to Parliament?—Mr. NEWBERRY—Certainly not.

The resolution was then put, and carried unanimously.—Thanks were voted to the chairman, and the meeting separated.

RAILWAY FROM LONDON TO CAMBRIDGE, NORWICH, AND YARMOUTH.

A meeting was held on Wednesday, the 30th ult., at the East India and Colonial Club Rooms, in Suffolk-street, Pall Mall, for the purpose of considering the propriety of establishing a railway to join the Northern and Eastern Railway, at Bishop's Stortford, to Norwich and Yarmouth, by Cambridge, Newmarket, and Thetford.

W. L. W. CHURCH, Esq., M.P., in the chair.

The Marquis of Douro, in moving the first resolution, observed that some people objected to railways altogether, and thought they did not contribute much to the public convenience; but even those persons would agree that a railway to Norwich was necessary when they reflected on those places which had an easy and quick communication with London by means of road, having an advantage over Norwich and Yarmouth, which proved highly injurious to the commerce and agriculture of those populous and important towns.

SAMUEL BIGNOLD, Esq. (of Norwich), in seconding the resolution, observed that he had lately had an opportunity of communicating with the leading manufacturers in Norwich, and there was an universal complaint that the manufacturing interest was suffering greatly in consequence of not having the advantage of a railway. The merchant and traders of London could visit York and return to London almost in the time they could now merely go to Norwich. He was prepared to support to the utmost the formation of a railway to Norwich, as he was satisfied that it was set on foot for the public good. Two years ago there was a talk of a railway to Norwich, but an unwillingness existed on the part of the citizens of Norwich to put down their names for shares, because they were apprehensive that the project would terminate like the Eastern Counties affair—that the railway would be completed for about thirty or forty miles from London, and Norwich left in the lurch. He highly approved of the line now contemplated, and would support it by taking shares to the extent of 1000*l.*, although it would not be in his power, being a commercial man, to take any active part in the management.

B. SMITH, Esq., M.P. for Norwich, proposed the second resolution, and expressed his opinion that the line proposed by Mr. Rastick, the engineer, was a good line. Indeed he did not scruple to say that he had always been of opinion that a line in the direction of Cambridge would be the cheapest and most preferable.

THOMAS HAMMOND, Esq., a magistrate of Yarmouth, and chairman of the Fishing Merchants' Club, seconded the resolution. Every one must feel the importance of a railway not only to Yarmouth and Norwich, but to the whole county, and he was authorised to state on behalf of the trading and fishing interests in the town of Yarmouth that they would lend their utmost endeavours to carry the measure into full effect. He agreed with Mr. Bignold that the work should be commenced simultaneously at each end, because Norwich and Yarmouth had been thrown in the back ground by the conduct of the Eastern Counties Railway Company. He understood that the members for Yarmouth were out of town, otherwise he had ascertained that they would have attended this meeting; but he could state for the information of the gentlemen present, that a few weeks ago he had a long conversation with them upon the subject of a line of railroad to Yarmouth, and they both pledged themselves to use their utmost endeavours to have it carried into operation.

Mr. RASTICK then read the following extracts from an able and elaborate report, which he had prepared:—

The line proceeds from Bishop's Stortford to Cambridge, thence to Newmarket, Mildenhall, Thetford, Attleborough, Wymondham, and Norwich to Yarmouth.

In carrying out the line, but little difficulty will be experienced in getting through Parliament as to the part between Bishop's Stortford and Cambridge, inasmuch as all questions with the landowners have been settled in the Act, obtained by the Northern and Eastern Company, but subsequently abandoned by them for want of funds.

The geological character of nearly the entire line is the chalk formation furnishing materials of the most favourable description both for cuttings and embankments, and the road when once made, may be maintained at the minimum expense.

The most expensive part of the line is between Bishop's Stortford and Cambridge, and the time required for its completion would be about three years.

This part of the line has, however, extensive advantages, forming as it does the key of all railroads to the metropolis coming in this direction from the north, as from Norwich and all other parts of Norfolk, Lincolnshire, Huntingdonshire, Cambridgeshire, Suffolk, and some portion of the county of Middlesex, thereby insuring a good dividend to the shareholders upon that portion of the capital expended in forming it.—The obtaining the proprietorship of this part of the line is therefore most important.

No tunnel will be required from Cambridge to Yarmouth, a distance of nearly eighty miles, and there are no extraordinary deep cuttings nor embankments, and only one viaduct, and no deep ravines, or rapid rivers to cross, whilst the materials are of such an excellent quality of cutting, that they may be cut upright, and a large portion of the land is of an inferior quality, that its purchase will form an inconsiderable item in the expenditure, and the line does not pass through an objectionable manner through any town.

The whole line will form an easy and expeditious means of communication from, and between Cambridge, Newmarket, the Sudbourns, Fordham, Soham, Mildenhall, Thetford, Brandon, Harling, the Burehams, Attleborough, Hingham, Wymondham, Norwich, and Yarmouth; affording facilities for traffic as from Ware, Hertford, Huntingdon, St. Neots, Ely, Bury St. Edmund's, Downham, Swaffham, Dereham, Lynn, and thence to Wisbech, Stamford, and the whole of the improving and important district of the Great Bedf ord Level of the Fens, and also forming the natural communication between the metropolis and the contested new district of the Great Level of the Wash.

With all these populous cities, towns, and villages, there can be no doubt but that the passenger traffic along this line will be immense, and the line between Cambridge and Yarmouth can be made in the short space of two years, whilst from Bishop's Stortford will require only one year longer, so that this entire line will be open to the public in three years.

The cost between Cambridge and Norwich is estimated at a less sum per mile than any other railway in the kingdom of so great an extent can be made for, this part of the line extending for sixty-three miles.

The cost between Norwich and Yarmouth is estimated at a still less sum per mile; this part of the line extending over about eighteen miles, and giving the greatest possible facility to the fishing interest in sending off their fish to the metropolis and the interior of the country, and forming the most advantageous and important station in the kingdom for the Northern foreign mail packets.

Mr. RASTICK also produced an estimate of the expenses of the formation of the line, together with a calculation of the traffic, from data carefully collected, showing a profitable return to the shareholders for the capital to be invested.

Mr. BICKWICH then handed to the chairman a letter from the Sheriff of Norfolk, expressing his most decided approbation of the meeting, and the proposed line of railway.

Mr. BIGNOLD proposed the third resolution, to the effect:—That John Utforth Rastick, Esq., having produced to this meeting sections and plans extending over such line, and having made a report thereon, showing its great advantages and facilities for execution, this meeting are of opinion that a company should be immediately formed for the completion of the same, to be styled the Norfolk, Suffolk, and Cambridge Railway Company; in doing which, he expressed the pleasure he derived in learning, from the report of their talented engineer, that the contemplated line of railway would not interfere at all with the parks or estates of private gentlemen, and he hoped that circumstance would conciliate many in their favour. He alluded to that statement in the report more particularly, because a very intelligent and influential gentleman, who he believed was honoured and respected by all who knew him (Mr. Richard Gurney), had expressed, through the press, his hostility to railways, because they cut through and destroyed valuable estates, but when that gentleman ascertained that Mr. Rastick's line would connect no such injury, he (Mr. B.) hoped that his extensive and powerful influence would be exerted in favour of an undertaking that could not fail to prove highly beneficial to his fellow-citizens.

Mr. RASTICK wished to state that there was one nobleman's park that would be affected by the line—namely, Lord Braybrooke's, but the act obtained by the Northern and Eastern Counties Railway Company, would obviate all difficulty in that respect.

ISAAC JERMY, Esq., Recorder of Norwich, and chairman of the County Quarter Sessions, in moving the next resolution, observed that a meeting had been advertised, to be held at Norwich next Thursday. To the requisition calling that meeting were the names of a great number of men of property and influence, and that meeting had been called for the purpose of considering, what particular line should be adopted, but what was best to be done, without regard to the interests of solicitors, agents, engineers, or any party whatsoever. For himself he could conscientiously state that he disengaged anything of the sort, but before they could expect to call the public in their cause, they must satisfy them that they were determined to carry on the undertaking perfectly independent of all private interests. The best way in which they could manifest such a determination, was to tender their co-operation to the meeting about to be held at Norwich, to afford them every information and explanation in their power, and to unite with them in carrying out the common object. If that meeting decided a little deviation from the proposed line, the object should be to endeavor to meet their view. So if meetings should be held in Suffolk or Cambridge, they

ought to be met in the same spirit.—A resolution to such effect was then put, and subsequently carried.

J. HARMAN, Esq. (chairman of the Brighton Railroad Company) seconded the resolution. He was in no way connected with the counties of Norfolk and Suffolk, but was a London man, and had been engaged in an undertaking of the same character, and the plans and sections of the proposed railway to Yarmouth having been laid before him and explained by Mr. Rastick, who had acted with him in carrying out the London and Brighton Railroad; he had no hesitation in saying that they met his full approval. At the same time he would state his conviction, that if they went before Parliament with any decided opposition, they would find it difficult to get parties to co-operate with them, if gentlemen who were interested in the promotion of the railway did not come forward in a manner to convince the monied interest of London and other places that they were earnest in their object. There ought, therefore, to be the greatest co-operation throughout the whole of the line. He could safely say, having looked at the plans and sections, and the estimate of Mr. Rastick, and having devoted some time to his able report, that that gentleman had furnished them with an estimate founded on honest principles.

CHRISTOPHER SPANTON, Esq. (Attleborough), stated that he had received a note from Sir Thomas Beevor, expressing his approbation of the undertaking. He had waited on Lord Abergavenny, who had told him that his engagements would prevent his attending the meeting, but that he was ready to assist the measure by all the means in his power, and his lordship had distinctly authorised him (Mr. Spanton) to state to the meeting that he was perfectly satisfied the railway would prove advantageous to his property and the country in general. A letter had also been put into his hand by Mr. Cufane, of Yarmouth, from the Mayor of that borough, approving the line; and he could assure the meeting that throughout the district in which he resided (Attleborough) the landowners were unanimously in favour of the proposed railway.

WILLIAM CLARK, Esq. (clerk of the peace of Thetford) begged leave to state that he had been requested to attend the meeting on the part of Thetford, and to express the concurrence of the inhabitants of that borough in the measure, and their desire to see it carried into full operation. He (as the agent of my Lord Ashburton) could also state that as the line projected by Mr. Rastick would not interfere prejudicially with his lordship's estate, he (Lord Ashburton) would support it. The intended railway would certainly pass through Lord Ashburton's property as well as his own, but he (Mr. C.) would cheerfully submit to anything that was for the good of Thetford and the country in general. John Dock, Esq. (of Bury) had also written to say that he highly approved of Mr. Rastick's line, and that the inhabitants of Bury were anxious to see the main trunk of the railway established, in order that a branch might be carried on to Bury, and that he was convinced the Marquis of Bristol, ever anxious to promote the interests of that borough, would give the undertaking his cordial support.

Mr. DRAKE said, that having been in communication with several of the noblemen and gentlemen whose names had been mentioned in the announcement of the meeting to be held in Norwich, and holding letters from Lord Sondes and others of those parties, containing assurances that they were not pledged to any particular line, he felt it due to the meeting, and particularly to those London cap-talists who had honoured the meeting with their sanction and presence, to assure them that the requisitionists of the Norwich meeting would approach the discussion of the subject unfeared, and quite prepared to adopt the most practicable and least expensive line; and, indeed, had they been aware of the great sacrifice in expense and labour which had been incurred in maturing and perfecting the able plans, sections, and report, which Mr. Rastick had this day produced, he (Mr. D.) felt assured that these gentlemen would not have felt any such meeting necessary. Mr. Drake was also intrusted with letters from influential inhabitants of the important town of Lynn, expressive of cordial co-operation in the objects of the meeting.

Mr. VARNISH having proposed the fifth resolution, which was carried unanimously, A. A. H. BICKWICH, Esq., governor of the corporation of the court of guardians of the City of Norwich, then moved a vote of thanks to the chairman, in doing which he observed that one advantage which would attend the railway would be the employment of a vast number of poor persons, who were at present in a state of the most abject poverty. He had been informed by several manufacturers, that the falling off in the staple trade of Norwich was mainly owing to the defect of communication between Norwich and the metropolis, as compared with the facility of communication between London and the northern counties. It was of vital importance to Norwich that that the railway should be completed as soon as possible, and it would prove a great benefit not merely to commerce, but to agriculture.

The CHAIRMAN returned thanks, and observed that he had felt great pleasure in attending the meeting. As one of the representatives of the county, he considered it to be his bounden duty to do all he could to benefit it, and he thought he could not benefit it more than by assisting in the accomplishment of that great measure they had met to carry out. He thought he might now congratulate the county on the fair prospect of attaining that desirable object, and the county of Norfolk would no longer be the only county that was not blessed with the advantage of a railway communication. It was his opinion, after due consideration, that Mr. Rastick's line was the one that ought to be adopted, going as it did near Cambridge. No agricultural county could possibly raise money enough for the purposes of a line of this nature, and therefore they must of course look to London and other places for the principal part of their funds. There was, however, only one way of inducing the monied interest to render assistance, and that was by taking shares themselves. Let every gentleman who wished to see a railroad in Norwich and Yarmouth established, just calculate upon the advantages he himself would derive from it—say fairly what he would give to see it accomplished—and then put down his name for that amount of shares. They would then very soon derive assistance from capitalists.—In pursuance of the above resolutions, a company was immediately formed, and shares to a large amount taken in the room.

[Our report is necessarily brief, from the press of other matter, this week, but, upon receiving a copy of the report and plan, our attention shall be more particularly directed to it. The utmost unanimity prevailed throughout the proceedings, which was very numerous and highly respecting, many gentlemen of property and influence on the proposed line, in addition to those who took an active part, being present.]

YORKSHIRE DISTRICT BANK.—In consequence of the directors of this bank having made an unexpected call upon the shareholders of an instalment of 5*l.* per share, a meeting of the proprietors residing in Sheffield and its neighbourhood was held on Friday week, at the Cutlers' Hall, to take the subject, which excites much interest, into consideration.—*Sheffield Independent.*

CARROVING CANAL.—At a meeting of the canal committee, held on Tuesday week, a dividend of 6 per cent. for the half-year was declared—making, with the Midsummer dividend, 9 per cent. for the year.

NEW SPANISH RAILROAD.—It has been proposed to form a company, of Spanish capitalists only, for the establishment of a railroad between San Felipe de Xativa and Valencia, only ten leagues' distance (all level ground), for the speedy conveyance of passengers, as well as silk, rice, &c., to the shipping port.

RAILROAD FROM ANTIGUA TO SEVILLE.—A plan for a railroad between Antigua and Seville has been submitted to the Government, by which passengers proceeding to Malaga will be spared the delay of crossing the Strait of Gibraltar.

BRISTOL AND EXETER RAILWAY.—The main arch of the Exeter bridge, 120 feet span, over the river Avon, has been completed. This bridge for magnitude and simple elegance, cannot be surpassed by any in the West of England, and will constitute one of the principal ornaments of Bristol.

BOLTON AND PRESTON RAILWAY.—Wednesday last, a Lancashire engine passed for the first time on the part

PUBLIC COMPANIES.

MEETINGS.

CONSOLIDATED COPPER MINES OF COBRE ASSOCIATION.—Notice is hereby given, that a HALF-YEARLY GENERAL MEETING of the proprietors of this association will be held, in conformity with the deed of settlement, at the office of the company, 26, Austinfriars, on Tuesday, the 12th day of January next, at One o'clock precisely. On that day two directors, namely, Russell Ellice and John Hardy, Esqrs., and one auditor, Walter Sharp, Esq., will go out of office, agreeably to the deed of settlement, but are immediately re-eligible, and are candidates for re-election. It is necessary that parties intending to offer themselves as candidates for the direction and auditship should leave notice of such their intention with the secretary, at the office of the company, 26, Austinfriars, at least fourteen clear days before the day of election.

By order of the court of directors.

WILLIAM LECKIE, Sec.

DE DUNSTANVILLE MINING COMPANY.—The directors of the above company give notice, that a HALF-YEARLY GENERAL MEETING of the shareholders will be held at the office of the company, on Tuesday, the 12th day of January next, at One o'clock precisely.

26, Birch Lane, London, December 23.

ROYAL SANTIAGO MINING COMPANY.—Notice is hereby given, that a GENERAL MEETING of the shareholders will be held at the office of the company, on Wednesday, the 6th day of January next, at One o'clock precisely, when the directors will make their report, and declare a dividend.

28, Broad-street buildings, Dec. 21.

WHEAL LEEDS MINING COMPANY.—The directors hereby give notice, that a SPECIAL GENERAL MEETING of the shareholders will be held at the office of the company, on Tuesday, the 12th of January next, at Twelve o'clock precisely, when a statement of the affairs of the company will be laid before them, and their opinion taken on the best measures to be adopted.

18, Great St. Helen's, Dec. 21.

CALLS.

DE DUNSTANVILLE COPPER MINING COMPANY.—Notice is hereby given, that a CALL of TEN SHILLINGS per share was this day made by the directors on the shareholders of the above mine, to be paid, on or before the 21st of January next, at this office.

26, Birch Lane, London, Dec. 16.

DANESCOMBE COPPER MINING COMPANY.—Notice is hereby given, that a CALL of TEN SHILLINGS per share was this day made by the directors on the shareholders of the above mine, to be paid, on or before the 21st of January next, at this office.

26, Birch Lane, London, Dec. 16.

LONDON AND BIRMINGHAM RAILWAY.—FINAL CALL OF EIGHT POUNDS ON THE THIRTY-TWO POUND SHARES.—The directors of the London and Birmingham Railway Company, having resolved that a FOURTH or FINAL INSTALMENT of EIGHT POUNDS per share, payable on or before the 15th of January next, should be called for on the 32 shares of this company, the proprietors of such shares are hereby required to pay, on or before the appointed day, to any one of the undermentioned bankers, the sum of £8 on each of their respective shares, viz.—

London—Messrs. Glyn and Co., 67, Lombard street, or at the office of the company, Finsbury Station.

Birmingham—Messrs. J. J. Mouillet and Son, or the Birmingham Banking Co.

Liverpool—The Bank of Liverpool.

Manchester—Messrs. B. Heywood and Co., or the Bank of Manchester.

The bankers have been severally instructed to charge interest at the rate of 5 per cent. per annum, according to the provisions of the Act of Incorporation; on all sums which shall be tendered after the 15th of January.

GEORGE CARR GLYN, Chairman, } Directors.
J. F. LEDSAM, Deputy Chairman, } Directors.
By order, R. CREED, Secretary.

Dec. 19.

LANELLY RAILWAY AND DOCK COMPANY.—Notice.—It is hereby given, that the committee of management have made a CALL of TEN POUNDS per share on the rateable shares, issued in August, 1839, to the proprietors thereof, are hereby required to pay the same on each and every of such shares, to the credit of the company, at their bankers, Messrs. Cocks, Billingsley, and Co., 45, Charing-cross, on or before Monday, the 15th of January next.

By order, JOHN BIGG, Secretary.

49, Old Broad street, London, Dec. 17.

WANTED, for the BERLIN and STETTIN RAILWAY.—A quantity of about 7000 tons of RAILS, to be delivered next year, either the whole or greatest part, and the remainder in spring, 1842. Offers will be received at our office till the 30th January next, by letters sealed and marked "Tender for Rails." Particulars of contract and drawings may be had at Messrs. N. M. Rothschild and Sons, London; or Messrs. Ewlethembart and Co., Liverpool.

25, Stettin, Dec. 19, 1840.

The directors of the Berlin and Stettin Railway Company.

ROYAL POLYTECHNIC INSTITUTION.—At the EVENING EXHIBITIONS of the ROYAL POLYTECHNIC INSTITUTION, M. LAURENT'S new CORNET BAND, in imitation of the horn band of the Emperor of Russia, is engaged for five weeks, and performs in the Great Hall, from a quarter to nine to half past ten o'clock, with a new programme, in two parts, each week, and in the morning from three to five o'clock. The extensive additions, stored with ONE THOUSAND SIX HUNDRED SCIENTIFIC WORKS, various working models, and works of art of great and general interest, as well as the lecture microscope, and new experiments, are both in the morning and evening exhibitions. Open from half past ten to five o'clock, admission 1s.; evening, seven to half past ten o'clock, admission 1s. A modified scale for schools.—The extensive LABORATORY is OPEN to PUPILS, the chemist conducts assays and analyses.

THE INVENTORS' ADVOCATE, AND JOURNAL OF INDUSTRY, a WEEKLY BRITISH AND FOREIGN MUSCILLARY OF BUT-ENNE, INVENTIONS, MANUFACTURES, and ARTS. is the most useful and comprehensive work of the kind published. It contains the scientific intelligence of the week; correct information on railways and steam navigation; list of patents granted and expired; specifications and descriptions of new inventions; reports of scientific meetings, and original papers on manufactures and the arts; with a variety of information interesting to inventors and patentees. It is not only a journal of interest for the day, but forms a standard work of reference, valuable to persons engaged in scientific, manufacturing, and mechanical pursuits. Vols. 1 and 2, neatly bound, are already published, and the 3d Vol. is now in course of publication.

The Inventor's Advocate, price Fivepence, postage free, is published weekly, by the proprietors, at the patent office, No. 194, Strand, London.

NOTICES TO CORRESPONDENTS.

In consequence of the alterations in the arrangement of the tabular matter, the Notices of Meetings, Calls, and Dividends, Latest Intelligence, Railway Returns, &c., will be found in the 8th page.

GLOSSARY OF MINING TERMS.—H. F. is informed that the pamphlet has been out of print some time; we, however, intend to reprint it, with considerable additions, to the journal, as soon as the contemplated alterations are perfectly arranged.

Dr. Graham must surely have made a mistake in addressing his advertisement to us. Our reference to any Number of our Journal, he will observe, that we are most particular in inserting those advertisements only, which, from having reference to the subjects treated on in our columns, can be of interest to our readers—as prospectuses of new undertakings, notices of calls, meetings, and dividends, descriptions of new inventions, sales of mineral property, scientific notices, and all information likely to interest the capitalist and shareholder.

Several communications are unavoidably postponed.

THE MINING JOURNAL,
Railway and Commercial Gazette.

LONDON, JANUARY 2, 1841.

With the close of the year the pleasing duty devolves on us of expressing our sincere thanks for favours conferred, and the obligations we owe to our several Correspondents and Subscribers for the past—with the commencement of the New Year, it equally behoves us to speak of the future. Our last week's Number closed the Tenth Volume of the MINING JOURNAL—COVERING a space of between five and six years—and it is with pride we may refer to its columns, as the best evidence afforded by Correspondents of the value attached to it as a medium of communication; while the list of our Subscribers at once affords satisfactory proof of the estimation in which the favours of those Correspondents, and our own labours, are held. The varied and numerous subjects which have formed matter of discussion in the Journal—embracing the "Establishment of a Tin Miners' Smelting Company"—an object accomplished, in a great measure, through the instrumentality of our columns; and that of "A Copper Miners' Smelting Company," which latter has effected all the preliminary arrangements necessary for its successful working; the discussion on the "Use of the Anthracite of South Wales," the correspondence "On Accidents in

Collieries," embracing the valuable papers communicated by Correspondents, whose experience enables them to write with confidence; with the several articles "On the Patent Wire Rope," and other equally practical papers, are of themselves alone sufficient to establish claims on the miner and the scientific reader for its support, more especially when it is considered that the MINING JOURNAL was the first publication, as it is now the only one, to direct attention to an important branch of national industry. As a record of the operations in the mining districts abroad and at home, and forming a Journal of reference with relation to discoveries and improvements, its pages may be consulted at a future period with advantage; while a careful abstract of the papers read at the Geological Society and other bodies, touching on those sciences allied to mining, render it valuable to those who may not be classed as "adventurers" in mines, to whom the Journal is more particularly addressed. If to the latter numerous class of our readers one claim be more prominent than another, it is the honest spirit and fearless independence we have ever evinced and exercised in conducting the Journal. Ever has it been our object and determination to expose abuses when found to exist; and although we have been mulcted in more than one instance, and every step has been taken by parties implicated to prevent an exposure in our columns, we have never allowed the guilty to escape.

In the performance of our duties there is much that is calculated to afford a pleasing satisfaction, in being able to present to our readers material of a useful and instructive nature, in the original papers or extracts from works of science, which appear in our columns—the reports of the proceedings at meetings of public companies—the correspondence from mining districts—original communications on practical subjects, with general information appertaining to mines, railways, banks, and other associations, which come under the designation of Joint-Stock Companies, at once rendering it a useful and important medium for promulgating knowledge, as well as for the insertion of advertisements immediately connected with the pursuits to which the Journal is more immediately directed.

It is our wish on all occasions to avail of the suggestions of friends, and such other means as may present themselves, calculated to improve the Journal, and thus to evince our desire to comprehend and meet the wishes of our Subscribers; and in directing attention to the ALTERATION in the last page, we find assured it will be admitted we have gone far to accomplish that object—the impossibility of rendering the real prices of shares in many of the undertakings being alone a sufficient reason, while the arrangement and increased information acquired will, we trust, be deemed satisfactory by our readers.

It may also be observed, that, in addition to our notices of New Companies, we purpose inserting, under the head of "Mining Notices," all such paragraphs as may appear in the London or provincial journals, without, however, being responsible for their authenticity.

The Supplement to the MINING JOURNAL has fully maintained its character, and the papers "On the Iron Trade" have been received as might be calculated upon from the interest attached to them—embodying much information on the subject, and embracing many valuable statistics. The closing chapters, up to the present period, with the position of the trade, and deductions arising therefrom, will appear in an early Number, thus completing the Volume, which may be then bound in a separate form.

The alterations proposed in the Journal will, in a great measure, supersede the publication of a Monthly Supplement, and, therefore, it is the intention to issue Supplements only as occasion may require, without pledging ourselves to the regularity of publication. The MINING REVIEW will, in such case, be confined, as was originally intended, to Original Papers and Reviews—amongst the former of which, the completion of the series on the Iron Trade will appear.

It is with much satisfaction we are enabled, on authority, to state, that the "Miners' Smelting Company" have, by the arrangements entered into, become a Corporate body, having possessed themselves of the Charter of 1691, granted to the "Governor and Company of Copper Miners in England;" and, further, secured the interest and property enjoyed by the "English Copper Company," which thus gives the establishment increased strength, as, in addition to the works at Cwm Avon and the Forrest Works, they will now employ those held by the "English Copper Company" at Llanelli, and thus be enabled, without further outlay or delay in the erection of buildings, &c., to considerably increase their "make." It is hardly necessary for us to observe, that the object of the company is that of co-operation with the miners, and to create one uniform interest as affects our tin and copper mines—abolishing the system of "middle men" (a term well understood in Ireland at least), and giving to the miner the fair value for his ore, subjected alone to the actual smelting charges and commission on the sale of his produce, while money is advanced to him in the interim, in the same manner as is now done to the tinner, the residue being subsequently accounted for and paid over to him on making up of the quarterly or half-yearly accounts.

The Miners' Company thus being protected by a charter, the several objections which might be raised as to the responsibility of parties, and the difficulties which we know to attend joint stock companies where the shares are held as scrip, or not regulated by Act of Parliament, Charter, or a well-defined Deed of Settlement, may be said no longer to exist. We are further glad to learn, that a fortnight will not elapse ere we may contemplate announcing to the mining interest the names of the highly respectable parties associated as governor, deputy-governor, and council of administration, of the Miners' Company. By the charter acquired, and under which the company is now established, the privileges extend over England, Wales, and Ireland, with power to raise, from time to time, such capital as may be deemed necessary, thus not only limiting the responsibility of the proprietors, but giving to the public a security that the capital put forth is not merely nominal, nor is it confined, the terms of the charter requiring that the amount of shares issued from time to time shall be paid up at spe-

cified periods. By this arrangement, the company will further acquire the smelting works and rolling mills and machinery belonging to the establishment at Llanelli, and on the banks of the Thames, as well as the warehouses and establishment of the company in London.

It will be observed, in our columns of to-day, that a University is projected at Newcastle, one department of which will be devoted to a School of Mines, and, we believe, with every prospect of success—thus establishing one of the branch schools which we would have projected as arising out of a Central or National School of Mines. The observations which fell from Mr. GREENHOW are well deserving of attentive perusal, and we augur, had Sir C. LEMON pursued the same course, he would not have been foiled in his attempt. The mining interest is, however, greatly indebted to the honourable Baronet, for we have reason to know, but for his exertions, and the articles which have appeared in the MINING JOURNAL, the project, as regards the Newcastle University, would not have been received with the favour which we are glad to find awarded it.

We have not, for some time, had occasion to notice the operations of the "British Iron Company," nor to advert to the cause of "ATTRWOOD v. SMALL," which had, we believed, gone to "the tomb of the Capulets;" but the announcement of a meeting, to be held this day, "to receive and consider the report of a committee appointed to investigate a case for the relief of the shareholders," has excited our attention, and will, doubtless, awaken that of the proprietary at large. We do not propose, on the present occasion, making any observation on the objects of the meeting, as we shall endeavour, in our next, to give not only a report of the proceedings, but the report of the committee and the resolutions adopted; in the meantime, however, we cannot do otherwise than express our regret that any subject should arise, forming a question of discussion, which may involve the necessity of employing the gentlemen of the long robe. Surely the proprietors have paid dearly enough for this; and although we consider the directors were bound to raise the question—we must say that prudence, both on their part and that of Mr. ATTRWOOD, would have saved many thousands of pounds, and years of bitter anxiety and care. Upwards of a million of money has been expended on a property which, at the market price, is almost valueless, and yet we find that fresh questions, of a legal nature, are likely to arise. That the company is most unfortunate, cannot be denied, and that the directors are highly honourable, will, we believe, be readily admitted; we trust, therefore, that no hasty resolves will be determined upon, and in case a deputation should be appointed to meet the board, that one feeling will animate all parties—the desire alone of promoting the interests of the company.

It will be observed, on reference to our columns, that a highly respectable and influential meeting of gentlemen connected with Norwich and the immediate line between that city and the junction with the Northern and Eastern Railway, was held on Wednesday last, when several resolutions were passed, with an unanimity of feeling which augurs well for the success of the projected measure. The report which we have given of the proceedings will best demonstrate the interest which the question has excited among those immediately connected with the districts through which the line is proposed to pass, and while we regret the aspersions thrown on the Eastern Counties Railway Company, we must admire the prudential caution observed by many of those who took part in the proceedings, making it a *sine qua non* not only to ensure the support of the monied interest, but the ultimate success of the measure, that the principle on which they started was "to begin at both ends." This is business like, and, in a great degree, ensures the accomplishment of the object; the Norwich folks, we find, are "wide awake," and we trust, now that they have "stirred from their slumbers," we may not have occasion to charge them with "sleeping on their post." With the promised support of the landholders and capitalists, and the promising report of the engineer, we see no reason why the line should not yield a fair return, if not a large revenue, upon the capital employed, more especially as the company will have the advantage of forming a junction with the Northern and Eastern line of railway, and thus establish a direct communication with the metropolis.

CURIOS COINCIDENCE IN ANCIENT AND MODERN HISTORY.—The following rude translation, from an old manuscript work, entitled *Recueil, tome VII. p. 174, et seq., a.p., 1691*, has been furnished as by a correspondent, as having some application to movements of the present day:—

"It was after many years, during which the tribe of the Myrmes had been subjected to the invasion of a small but powerful neighbouring tribe, located across the waters, and known as the Smello-Merens, that a stranger from Angloria visited the lands of Curnebulus, and there discovered the inhabitants principally employed in bodies or horses, mounted on paxi, from which they extracted certain divers metallic products, which they bartered for certain cloths to the Smello-Merens, whose vassal, made of timber, traversed the waters, and carried away the produce of the barrows so acquired by the Myrmes. The want of information in those times was such, that the products so obtained were at an after period, by means of a fixed furnace, cast, brought into a state of fusion, and then again bartered at a high price. This state of things having come to the knowledge of the Anglorians, he at once resolved on forming a party of enterprise, with the object of relieving the tribe of Myrmes, and having held a parley with several of the primitive chiefs, at once determined on bringing the tribe of the Smello-Merens into the field. Tonawarka, Wye, Gwyr, Llanrhidian, and Bala, with several independent chiefs, including James and Ben's Sons, were called into action, and it was said that such number would arise therewith. Many of the chiefs, however, among whom were Cwn Bres and others, moved in those times for independence of character, resolved on securing parts of Cwm Arfon, the Forrest, and Llanelli, although situated from their hosts, and the 'baxi,' with which they were so closely connected, which they accordingly acquired, even in the very centre of the lands on which the Smello-Merens had pitched their tents. This bold measure at once ensured to them the rights of which they had been long deprived—on the 1st of Aug. did the Smello-Merens invade the Myrmes, but finding they had acquired knowledge, at once bartered on fair terms for their produce. Several and many of them, however, would not trust to the tribe who had profited at their cost, and joined the chief who had established themselves in the principality, and thus gave a power which, at the time of writing, was likely not only to be maintained, but to be increased."

EXPORTATION OF THE PRECIOUS METALS.—The exportation of the precious metals from the port of London to foreign parts for the week ending the 24th ult., was as follows:—Silver coin to Belgium, 2000 oz.; Mauritius, 4000 oz.

MINING ACCIDENTS.—On Tuesday last, as several men were in the boiler-house of Ballewddon Mine, changing their clothes to go underground, a large tin can, containing 9 lbs. or 10 lbs. of gunpowder, exploded with a dreadful crash, carried away part of the roof of the boiler house, and dreadfully scalded seven of the poor fellows who were present, some of whom were obliged to be conveyed to their houses in carts, with very little hope of recovery.—On the afternoon of Tuesday week, John Catt, of Brighton, collier, accidentally fell into a coal-pit, at the Seaford Nest, and was killed instantly.

RAILWAY AND COMMERCIAL GAZETTE.

ORIGINAL CORRESPONDENCE.

CERTAIN METHOD OF ASSAYING COPPER BY ELECTRO-CHEMICAL ACTION.

TO THE EDITOR OF THE MINING JOURNAL.

Sir.—As the tide of knowledge is spreading fast, and improvements are taking place in almost every branch, I am induced to push my little bark into the stream, that those who will may take advantage of that which I have practised (alone, I believe) since January, 1838. The subject of assaying has occupied a portion of your Journal lately, and remarks have been made on it by those who have taken up the subject of Sir Charles Lemon's school; and in an able paper, by Mr. Pridoux, he alludes to it, and also to electro-chemistry. My object will be to show that the application of this science may be made available to the student, old or young, in analysis, and by which he may become master of "the art of knowing the per centage of copper" in any of its ores. I remember the day (I believe it still exists in some places) when the door of the assay-office was as closely "tilted" as that of a freemason's lodge, and none but the initiated could be permitted to know the "mysteries of the art"—it was even as profound as the "mystery of the standard." But I will proceed to show that a perfect mode of knowing the quantity of copper in any ore is feasible, and, further on, I will demonstrate it, by the atomic system, to the satisfaction (I think) of every one. The process may require a little more time than "the dry way," but not more labour; and I feel satisfied I could instruct a person (one of ordinary capacity, but not with hands like the feet of an elephant) from three to six days to give the per centage of an ore as surely (if not more so) as any assayer. It is but just to say, I am indebted for the first idea on the subject to Mr. Martin Roberts, when I visited Cwm Avon Works, in 1837; from that period I have tried hundreds of experiments, and devoted much time and labour to the object, so as to bring it to its present state. I began to assay (if I may apply the term) by electro-chemical action in January, 1838—then the precipitation of the copper required four or five, or even more, days (I then used platinum), whilst now it seldom requires more hours—sometimes less—and this time may be shortened, and also the solution of the ore, and I shall be glad to hear that it has been done.

Process.—A given weight of the ore (as prepared for assaying by the dry way) is dissolved in an acid (*aqua regia* is the best), evaporated nearly to dryness; redissolved in water, filtered, and then treated as the copper solution, I shall describe a little further on. I may remark, I have precipitated the copper on gold and platinum, and adopted various forms, particularly the helix, which I used more than two years, but I find copper cylinders answer better, and there is little trouble in cleaning them, compared with the more precious metals. I feel warranted in saying I have tried hundreds of samples, and have never been deceived by the process—that cannot err; but error may arise from not having a perfect solution, and in the manipulation of the ore, before it is subject to the electro-chemical action.

Now for the demonstration, and which is a beautiful proof of the correctness of the atomic theory:—Take 250 grs. of the crystallised bisulphate of copper (or, half the quantity), which contains 64 grs. exactly of pure copper, dissolve it perfectly, add two or three drops of acid, and place it in an unglazed earthen pot, which will hold three fluid ounces; place this in another somewhat larger, glazed, in which there is a weak solution of hydro-chloric acid; introduce a copper cylinder (to which a wire is soldered, and whose exact weight is known) in the copper water, and an iron cylinder (with a wire attached in the same manner) in the outer vessel of acid and water; amalgamate the ends of the wires with nitrate of mercury, and connect them in a cup of the same metal, or in any way, so that they are in perfect contact. As soon as the circuit is perfected the operation will commence (and which may be known by a slight hissing sound), and will not cease until all the copper is precipitated on the copper cylinder, and which may be effected in the space of from ten to twelve hours; then take out the cylinder, dip it in water, dry and weigh it—its increase in weight will be the per centage of the copper, and, in this case (for half the quantity), it will be 32 grs. heavier than it was before.* The operation, when completed, can be known by taking one drop out of the solution and placing it on pure gold, or platinum, and touching it with a zinc rod—if no copper be precipitated on the gold, the solution will be free from copper. Thus, then, may every one interested in the produce of copper know the exact per centage of an ore, according to the sample. So beautiful and perfect is this system, that one might swear (not speaking profanely) to the produce of a sample, provided all the previous operations were performed with accuracy. By the dry assay there is considerable loss, and which I have proved by "check samples," on many occasions varying from $\frac{1}{2}$ to $\frac{1}{4}$ per cent., and yet the miner must sell by the dry assay; and any one connected with the sale of ore knows (especially in those of low produce) what a difference one-half per cent. makes in the price.† Should this loss, in the dry way, be doubted, get some old pots from an assay-office, and test them, or try the slags after the "prill" of copper has been extracted—in both, copper can be traced. A word on these Cornish pots (although the best of crucibles for certain purposes)—they are greater robbers of the miner, from their roughness, than ever the furnace is to the smelter. The former loses all that is absorbed—the latter gets it when the furnace floor or hearth is broken up; and as to volatilisation, more is carried up the assay-office chimney (in proportion) than ever ascended through a furnace stack. In your Journal of the 14th November, you have a letter from "A Miner," dated London, in which he speaks of an important discovery made by "Williams, Foster, and Co.," in extracting more metal from their ores than other smelters can effect, and which is supposed to be occasioned by the absorption which takes place in the assay-office trials; for, if the dry assay was not in favour of the smelter, how could they make a surplus of from 8 to 14 per cent.?

I think I have shown that a perfect mode of assay can be effected, and let no one doubt of success—cleanliness and accuracy are required in both plans—but, in the dry way, much labour (and hot work too), practice, and experience are necessary to know "true copper;" but, by the process I advocate, the copper, by an unerring law, is made fine, and requires neither judgment or practice at all, and yet must be correct. I will conclude with but one remark, which is, that I really do not see why, in buying and selling, there should not be the most perfect understanding as to the value and quantity of the thing bought or sold; and as this rule is admitted to be just in other matters, would it not be so also in the sale of copper ore?

I am, Sir, your obedient servant,

R. W. BYERS, F.L.S.

[We forbear making any comment on the communication of our correspondent, as the subject will, doubtless, be treated on fully by those who are more intimately acquainted with the details than we can be expected.]

THE MINERS' SMELTING COMPANY.

TO THE EDITOR OF THE MINING JOURNAL.

"Great evil has arisen to individuals and communities from allowing fallacies and falsehoods to pass, uncontradicted in those channels through which they are conveyed to the public mind,"—Southey.

Sir,—Really you seem to be a little unreasonable in expecting any reply to the malignant sneers of your Illugan correspondent—or rather, as you more properly designate him, a copper smelter—for beyond what is thus absurdly meant to be so very severe, there is nothing worthy of attention. You will notice, however, with what amiable candour he has prefaced the above quotation from Southey, and how consistently he has insinuated that the Miners' Smelting Company is treacherously based on "the principle laid down by the innovators, that the profits on the copper smelting trade are exorbitantly large," whilst he cannot but know, that it proceeds from the miners themselves, in their own defence, and in order to get rid of the complicated and expensive machinery now employed in conveying their products to market—precisely on the same principle as modern steam-engines, with all their various and beautiful improvements, are preferred to the cumbersome and ungainly erections of the last century.

The only clever hit of this copper smelter, in disguise, is the contention that Messrs. Vignes and Co. have had the presumption to build their bank

* Whilst preparing this letter, I placed 120 grs. of sulphate of copper in my apparatus, in ten and a half hours it was finished, the cylinder weighed 200 grs., and when reweighed 217.6—i.e. 17.6—having lost $\frac{1}{2}$ of a grain. I examined the late copper report by gold and zinc, but not a trace of copper. I added liquid ammonia, which threw down precipitate of zinc, and which, when estimated, would be equivalent to the weight wanting; therefore, should any of your readers try this experiment, the crystals of copper should be examined, that no minute crystals of zincate of iron be attached to them, otherwise it will lead to error.

† At the sale at Swanage, on the 10th Dec. last, in two parcels of ore from Bally-Mortagh, the difference in price between 32 and 32 "as the per ton."

sufficiently large to accommodate as many friends as may be disposed to embark with them on so pleasant and so promising a voyage. But I forget—there is certainly another hit equally clever and surprising, for, in his simplicity, he admits, with admirable naïveté, that he forsooth does not at all object to the formation of another copper company—amusing, very ! as if the Miners' Company differed from those already in existence, other than in the greater simplicity and more just proportion of its superstructure, and in the greater depth and more massive solidity of its foundation.

I am, Sir, your obedient servant,

ONE OF THE INNOVATORS.

[As our correspondent cites the quotation of "A Mine Adventurer," we may be allowed to quote him. "One of the Innovators" observes, that the establishment of a Miners' Smelting Company "proceeds from the miners themselves in their own defence, and, in order to get rid of the complicated and expensive machinery now employed in conveying their products to market." This fact is so notorious, that it affords convincing evidence of the opinion entertained by the miners and mine adventurers, that at least there is a "something rotten in the state;" and hence the innovation or conservative reform which is being brought about. There can be no doubt but that the Miners' Smelting Company must withdraw from the other houses a certain quantity of their ores, and must also be competitors in the market for the coke or sheet copper, but we believe it was never intended or thought of driving the body of smelters out of the field—the main feature in the establishment being to afford to the miners facilities and opportunities of obtaining the full value of his ore by selling it in the state of metal. This accomplished, it is not compulsory on the miner to render his ore to the Miners' Company; but he has still the opportunity of going to public ticketing. The Cornish motto—"One and all," should, however, be illustrated in the support afforded to those who have, at much labour and cost, enabled the miner and mine adventurer thus to be independent of the smelter.]

MINING IN IRELAND, AND REPEAL OF THE UNION.

TO THE EDITOR OF THE MINING JOURNAL.

Sir.—It is with much surprise, that, on perusing the *Pilot* of this evening, I found the name of one of our principal officers (a gentleman for whom I entertain the highest respect, both as to his ability and integrity) associated with Mr. O'Connell's last link of his tail—"the repeal." I refer to the letter of Mr. J. Petherick, read at the meeting of the "Loyal National Repeal Association," held on Monday last, with his subscription, which afforded Mr. O'Connell opportunity to laud to the skies this "true friend of liberty—a plain, honest, straightforward Englishman—a rough English diamond." I do not, for one moment, wish to preclude Mr. Petherick, or our excellent secretary—or, indeed, any director or officer of the company, from the free expression of their opinion, yet I cannot but think, in the peculiar position in which Mr. Petherick is placed, paying away, as he says, 2400/- a week, which should represent the wages of no less than 3000 individuals, over whom he is manager, and who are subject to his control, that it must be manifest to our board of directors, an example of this nature being allowed to be set, is one which may have a baneful influence. I should say the same if he publicly avowed his attachment and alliance to an Orange Lodge, or any other body, for I enter not into the question. As our meeting is convened for a few days hence, I trust the directors will feel it their duty to animadvert, in their report, on this unusual course pursued by their manager, if they have not already communicated with him on the subject. I should be sorry to see our company mixed up with religious or political discussion or questions, as I feel assured it would militate much against us, while gentlemen on your side, finding that even mining enterprise cannot be carried on in Ireland without party spirit betraying itself, would naturally conclude that such course is calculated to injure the country seriously, and to affect mining enterprise. I furnish you my name and holding for your satisfaction, subscribing myself.

A SHAREHOLDER IN THE MINING COMPANY OF IRELAND.

Dublin, Wednesday Evening.

[We regret that we should be called upon to insert the letter of our correspondent, who is well known to us, more especially as the question raised is one of that delicate nature which, in a great measure, precludes us from offering any observation. We do not profess to understand the Repeal question, even did it form a subject for discussion in our columns, but trust, in the present instance, an explanation can and will be afforded at the forthcoming meeting. If there is any country where power should not be improperly exercised it is Ireland, and as our friend, Mr. J. Petherick, is from the county of Cornwall, where the inhabitants are not wanting in shrewdness or a knowledge of mankind, we are induced to hope, and further, to express our conviction, that while he avails himself of the one quality which his countrymen possess, he will appreciate the power placed in his hands, in exercising it for the benefit of his employers and those employed. As a general principle, we think it at all times better to avoid appearing as a partisan or advocate of any particular measure where a considerable difference of opinion is known to prevail, and after many years intimate intercourse with Ireland, from peer to peasant, we feel ourselves justified in saying, that honesty of intention and fair dealing is all that is required to satisfy those on the other side, and to ensure a reciprocity of feeling.]

INSTRUMENTS USED IN BLASTING.

TO THE EDITOR OF THE MINING JOURNAL.

Sir.—In the *Mining Journal* of the 19th instant, you published a letter signed J. Pridoux, in which is the following paragraph, viz.:—"The ground, in 'Pod' (or 'Pool,' the word is not distinct) adit, was once so strong that our miners could not work it, until a German made borers for the men, which rendered the hole larger at the bottom than top, and thus retained the explosion, and burst the rock." As it has appeared to me, for some time, to be very desirable to make the hole, when blasting hard rocks, larger at bottom than top, it would greatly oblige me, and some other of your readers, if you, or any of your correspondents, through the medium of your paper, could give me any information how, or where, such tools or instruments could be obtained. Hoping you will excuse my thus troubling you.

I am, Sir, your obedient servant,

A CONSTANT SUBSCRIBER.

[We doubt not but that Mr. Pridoux will afford to "A Constant Subscriber" the information he seeks.]

SUPERIORITY OF CORNISH STEAM ENGINES.

TO THE EDITOR OF THE MINING JOURNAL.

Sir.—Being perfectly convinced of your zeal for the promotion of science generally, I venture to offer a few remarks on the great advantages of a Cornish steam-engine, for lifting or pumping of water, to any others which have hitherto been used in the United Kingdom. In proof of which I am convinced by witnessing this day the operation of the engine recently erected on the New Southwark Water Works, in the Battersea-fields, by Mr. W. West, and manufactured by Messrs. Harvey and Co., of Hayle Foundry, on the same principle as that erected by those gentlemen on the East London Water Works, at Old Ford, the effect of which need only be witnessed to satisfy the most scrupulous observer of its superiority, as a saving of 3000/- per annum is thereby effected. The engine erected on the New Southwark Water Works, in the Battersea-fields, to which I have previously drawn your attention, is a 64-inch cylinder, her length of stroke is 10 ft. in the cylinder, and 10ft. in the pump, working a 32-inch plunger pole, with the patent valves by Messrs. Harvey and West, which are so constructed, and the operation so easy, that it would be difficult to persuade a common observer of the existence of a valve therein. Should this engine prove as effectual and economical as that of the East London Water Works (to which I have before alluded), of which I have no doubt, I am quite satisfied that the opinion of every unbiased engineer would be such as to admit those engines to be far superior to any others which have hitherto been used.

I am, Sir, your most obedient servant,

AN ADMIRER OF MACHINERY.

Ginger's Hotel, Westminster, Dec. 23.

[The communications with which we have been favoured by Mr. Wickstrand, and the correspondence which has from time to time appeared in our Journal, we consider affords convincing proof of the superiority of Cornish engines; but it is hardly necessary to say that the same case must be observed in working them, and causing the cylinders, steam pipes, &c., to obtain the same results. Mr. West has been most successful at Fowey Consols, and other mines in Cornwall, as also of the East London Water Works. We are glad to find that he is becoming more generally known, but, we must say, at the same time, although we prize Mr. West, he is not the only engineer Cornwall can produce, and many are there who will not allow Mr. West to bear off the palm. Messrs. Hockley and Sons, Gloucester, Risdon, and others, might be named, but the best tool is Miners' Lewis' Monthly Report, which appears in our columns, whereby it will be at once seen who are held in the highest estimation, and what is the power obtained under their supervision.]

MINERS' INSTITUTES.

TO THE EDITOR OF THE MINING JOURNAL.

"For if the people die for want of knowledge, they who are set over them shall also die for want of charity."

Sir.—Having in former letters stated that labour education was equally necessary with literary education to make an intelligent miner, I now beg leave to show how these may be combined, and that to acquire the former does not necessarily preclude the acquirement of the latter. If it is considered one should take precedence of the other, I should say let labour education be the first, and that boys, as soon as they can read and write a little, cannot be too soon put to work, provided the labour is in proportion to their strength, and not kept too many hours at work in the day. A young man who spends his youth accustomed to task his mental powers only, would feel much greater aversion to commence manual labour than one who had worked with his hands would feel to commence study, particularly the study of the sciences connected with mining, which are by no means abstruse, and may, probably, be looked on as a source of amusement for the hours of relaxation from bodily toil. Thousands have studied in this way, and that such is not more general is because knowledge, unallied with wealth, rank, or power, is not respected, in fact, is often called useless knowledge, and is thus unpopular—"public opinion follows what is honoured; honour knowledge, and you chain to it that opinion."

The occupation of the miner is sometimes disagreeable, and often dangerous; he is exposed to the vicissitudes of fearful elements, but, although such may prematurely waste the animal powers, it does not tend to cramp the intellect, but, on the contrary, often calls forth the exercise of every ingenuity and device, and learned gentlemen, who are candid enough to admit the truth, must often have witnessed with astonishment the useful expedients resorted to in cases of emergency by the uneducated (as they are called); this, I think, ought rather, however, to be used as an argument for literary education than against it.

In cities and towns much good has certainly resulted from the establishment of mechanics' institutes for the working classes, and why in all cases where established they have not been equally successful I shall not now stop to inquire, but I take leave to assert, without fear of contradiction, that no class of working men has better opportunities of establishing such schools than miners—their hours of labour are rather shorter, and rates of wages, although not the highest, are, on the average, less fluctuating than most other labourers—two hours every evening could easily be found for the improvement of the mind, were it made fashionable amongst them to allot that time for this purpose. Some gentlemen may object to this, and say, why, would you not allow the poor fellows a little time to amuse themselves after their hard toil? I would reply, Yes, but let it be the amusement of the philosopher rather than that of the dancing master. A respite from bodily labour may be necessary at some time, but the mental faculties are enfeebled for want of employment, and equally require exercise, while the body requires rest; and I appeal to all those who ever had to earn their bread while they prosecuted their studies, if they did not feel a keener relish for both duties by attending to them alternately?

It may be unnecessary to propose any particular education for these evening schools (miners' institutes), as every locality will best judge what answers themselves. I would say practical arithmetic, principles of drawing, surveying, mathematics, and occasionally lectures on the physical sciences, with a well-assorted library, suited to the members. Were all the officers of any mining establishment, with the co-operation of owners, to enter heartily, and with good earnest, into the adoption of the system here alluded to, I think I could answer for the workmen following their example; and I should hope many will be found to do so who might be opposed to a tax on the community to make scholars, as they might think such was intended to break the multitude to intellectual vassalage.

Education in any shape has many opponents, there is a class of persons who appear to cut their arguments to find out how little education the miner can do with, and not as to how much he can obtain. There is another class, who are often loud in their pride about the "uneducated," talking of "the wonders of science," and the "difficulties" of study: these are generally men who have never been fully sensible of the value of mental development in themselves, and therefore cannot be expected, or wish, to forward it in others; and last, though not least, there is that numerous class, too lazy to advance themselves, and are afraid that they would endanger their own superiority, by any effort, which they think tends to the equalisation of knowledge. But, on the other hand, popular education, I believe, has many sincere and able friends, if they could be brought to act together, and to act consistently. I have mentioned the mechanics' institutions in town, as worthy of imitation; I may also notice that on the 8th of December last a meeting was held at Monkseaton (a rural district, in the neighbourhood of North Shields), for the establishment of a "literary institution" by the labouring classes, at which meeting the clergy and magistrates attended to lend their assistance—I would, therefore, say to the miners and miners' friends, "Go and do thou likewise."

I remain, Sir, your's, &c.

A WORKMAN.

[The sensible observations of "A Workman" require no remark on our part to give them weight. We have ever been the advocates and supporters of education, more especially to the mining community, and the project of our correspondent appears feasible, more especially as our favourite notion of mining schools cannot embrace every district.]

ON MR. MARTIN'S IMPROVED BORERS AND IMPROVEMENTS IN BLASTING.

TO THE EDITOR OF THE MINING JOURNAL.

Sir.—Observing in your Journal of December 5th, a letter from Mr. Alfred Martin, of Penzance, relative to certain improvements in boring and blasting rocks, with drawings of a new set of boring instruments for mining purposes, I beg to offer my opinions on his presumed improvements, which, as a practical miner, I consider my duty to do. Now, supposing I wanted to bore a hole in a hard "caspel" sand, and by way of experiment I first try his hollow bit, which has four corners; now, it is well known to miners that in a hard stone the corners of a bit are the first that begin to wear, and when borers have so many corners to them (which is the case with Mr. Martin's), it would be next to impossible to bore a hard stone with them, as they would be blunted so fast.

As regards the sharp-pointed bit, that would be entirely useless in hard ground, for the resistance offered would be so great that no sharp-pointed instrument could stand it. With regard to the last-mentioned bit, there need but little to be said about it, for, if the first answered, there is no doubt but that the last would also. In my opinion there are no borers equal to those that are constantly used in the mines of Cornwall and Devon, whose size generally runs from one to two inches diameter; for hard ground I like to see the bit with a slight convex curve, whilst for fair or soft ground it cannot be too straight. With the borers I have just described I would challenge them against Mr. Martin's in fair "killis" (for that is the only ground, in my opinion, which would at all suit his)—boring two feet, in one—for the nature of his bit, or tip, is such that it would not bore more than one inch at the most before he would be obliged to substitute it for his other borers, whilst, with the plain miners' bit, from four to six inches could be bored without stopping, and a saving of time is effected, which is a very important consideration in underground operations.

Mr. Martin speaks of holes being bored a foot or two deeper than there is occasion, for "tamping" only; now, in my experience, I never yet saw a hole bored one inch deeper than it has been thought it would "tare," and I have bored and "tared" them from four inches to several feet deep.

In speaking of the saving of powder for mining purposes, I condemn entirely the adulteration of powder for blasting, either for making a "sink" in a shaft or "squearing" up the "cut" in an end, for the great desideratum in such cases is to load as much powder as possible in a given space, in the bottom of the hole. I have heard of experiments being tried—I believe, in Germany—where holes were fired with half the quantity of powder of the supposed charge, or load, and the like quantity of sand mixed with it, which had the desired effect. Now, I am of opinion, that if the same quantity of powder had been given without the sand, the same effect would have been produced; but where holes are bored in con-